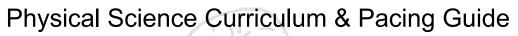




Content Area: Physical Science	Grade Level: High School	
Title of Unit: Volume and Mass	Number of Weeks/Days: 12 days	
Standards:	Assessment:	Resources:
	Exp. 1.1: The students will determine what happens when baking soda is heated. 1.2 Volume: The students will be able to define volume and learn how it is used in measuring matter. 1.3 Reading Scales: The students will learn how to read scales accurately. 1.4 Measuring by Displacement: Students will measure volume by displacement of water. 1.5, 1.6, 1.7 Balances: The students will be able to distinguish between and describe differences between balances. 1.8 Balance Sensitivity: Students will learn the limitations of their electronic balance	IPS Equipment (Chapters 1,2,3,4,5,6): Balance, Equal-Arm Balance, Electronic Beaker, 100 mL Beaker, 250 mL Test tube brush, nylon Bucket, Plastic 5 Quart Ring stand Ring Ring stand clamps (buret) Wire Gauze Bottles, small plastic Crucible, size 00, porcelain Cylinder, graduated 10 mL Cylinder, graduated 50 mL Dish, Evaporating, size 000 porcelain Electrolysis electrodes Funnel, plastic Gram mass set Metal cube, cylinder, slab set Bunsen burners Burner tubing, 3/16 I.D. x 3/8 O.D. Strikers Power supply, 6-12V Test tube rack Safety Glasses Scoopula Stirring rods, glass Policeman Stoppers, Rubber #2 Solid Stoppers, Rubber #4 Solid Stoppers, Rubber #4, 1-hole Stoppers, Rubber #4, 2-hole







Test tube, Pyrex 20x150mm Test tube, Pyrex 25x150mm Thermometer, 76 mm immersion, -10-110°C Triangle, clay wire Tubing, glass, 6mm, straight Wire leads with Alligator Clips



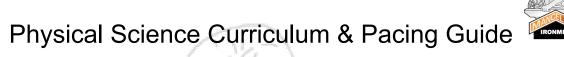






Content Area: Physical Science	Grade Level: High School	
Title of Unit: Mass Changes in Closed Systems	Number of Weeks/Days: 11 days	
Standards:	Assessment:	Resources:
HSPS1.4 HSPS1.5 HSPS1.7	2.1, 2.4, 2.5, 2.6 The students be able to define a change in mass as a final value minus an initial value and will learn what a closed system is. 2.2, 2.3 Students will learn how to display class data graphically. 2.7 The students will be able to conclude, based upon lab results, that mass remains constant in closed systems. 2.8 Students will be able to differentiate between laws of nature and laws of society.	Alcohol, isopropanol 99% Alka-Seltzer Sodium bicarbonate Boiling chips Citric acid, granular hydrous Copper, fine granular, reagent Copper turnings Copper acetate, monohydrate Magnesium sulfate







Content Area: Physical Science	Grade Level: High School	
Title of Unit: Characteristic Properties	Number of Weeks/Days: 18 days	
Standards:	Assessment:	Resources:
HSPS1.3 HSPS1.6	3.1 Students will be able to differentiate between properties of substances and properties of objects. 3.2, 3.3 Students will discover that mass per unit volume is a characteristic property of a substance. 3.4 The students will learn how to correctly report calculated answers. 3.5, 3.6, 3.7, 3.8 Student will learn how to measure the densities of solids, liquids and gases. 3.9 Students will determine that freezing/melting point is a characteristic property. 3.10 Students will learn proper graphing techniques. 3.11, 3.12 Student will determine that boiling point is a characteristic property which depends upon elevation. 3.13 Students will be able to identify substance based upon their density, melting	Filter paper, Whatman #1 tape, 2cm roll Filter paper, Whatman #1, 12.5cm Glycerine Hydrochloric Acid, Conc. 4-(tert-octyl) phenol (TOP) Pens, felt-tip, green, black, blue 2,6 Di-tert-butyl-4-methylphenol (BHT) Potassium nitrate Sand, washed Sodium carbonate, monohydrate Sodium chloride, fine Sodium nitrate, granular, purified Sugar, granulated Sulfur, powder Tea Wood splints Zinc, Commercial, 0.05cm x 1 cm x 1cm Scientific Process Supplements: Hidden Figures October Sky





Content Area: Physical Science	Grade Level: High School	
Title of Unit: Solubility	Number of Weeks/Days: 13 days	
Standards:	Assessment:	Resources:
	4.1 Students will discover that amount of solid that dissolves in a liquid is dependent on the volume of the liquid. 4.2 Students will be able to calculate concentration of a solution. 4.3 Students will learn that solubility is the concentration of a saturated solution. 4.4 Students will learn that solubility of solids increases as the temperature of the liquid increases. 4.5 Student will learn properties of commonly used alcohols. 4.6 Students will learn that solids can be differentiated by comparing solubilities in different solvents. 4.7 Students will determine the solubility of carbon dioxide in water. 4.8 Student will learn that the solubility of gases decreases as the temperature of the solvent increases. 4.9 Students will learn the certain gases, when dissolved, will cause water to become acidic. 4.10 Students will learn that many things are dissolved in the water that they drink.	





Content Area: Physical Science	Grade Level: High School	
Title of Unit: Separation of Mixtures	Number of Weeks/Days: 16 days	
Standards:	Assessment:	Resources:
HSPS1.3 HSPS1.6 HSPS4.1	 5.1 Students will separate and identify a mixture of liquids using characteristic properties 5.2 Students will investigate the use of fractional distillation in the petroleum industry. 5.3 Students will investigate how to separate insoluble solids based on density. 5.4. Students will separate a mixture of solids using solubility. 5.5 Students will investigate separating soluble solids based on changing temperature. 5.6 Students will separate a mixture that is in minute quantities using paper chromatography. 5.7 Students will Investigate the separation of gas mixtures. 5.8 Students will be able to differentiate between mixtures and pure substances. 	





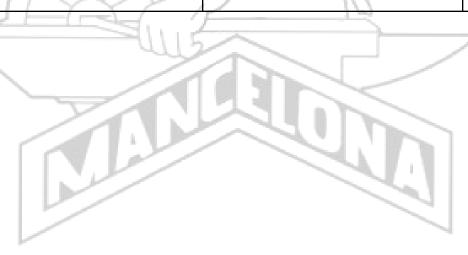
Content Area: Physical Science	Grade Level: High School	
Title of Unit: Compounds and Elements	Number of Weeks/Days: 17 days	
Standards:	Assessment:	Resources:
HSPS1.1 HSPS1.2	6.1 Students will be introduced to idea that some pure substances can be decomposed. 6.2 Students will decompose the pure substance water using electrolysis. 6.3 Students will investigate the process of synthesizing water. 6.4 Students will synthesize the compound zinc chloride. 6.5 Students will investigate the history behind the development of the law of constant proportions. 6.6, 6.7, 6.8, 6.9 Students will investigate the rate of reaction of copper and copper compounds to explore the topics of complete and incomplete reactions, as well as speed of reactions. 6.10 Students will investigate the history of the development of the periodic table of elements. 6.11 Students will survey the most common elements near the surface of the earth.	







Content Area: Physical Science	Grade Level: High School	
Title of Unit: Sludge Test	Number of Weeks/Days: 7 days	
Standards:	Assessment:	Resources:
HSETS1.2		







Content Area: Physical Science	Grade Level: High School	
Title of Unit: Heating and Cooling	Number of Weeks/Days: 11 days	
Standards:	Assessment:	Resources:
	12.1 Students will discuss the use of a calorimeter, 12.2 Students will use a calorimeter to measure changes in temperature in warm and cool water, 12.3 Students will learn the meaning of the Joule, a measurement of energy, 12.4 Students will use a calorimeter to measure changes in temperature between water and metal, 12.5 Students will learn the definition of specific heat, 12.6 Students will use a calorimeter and the concept of specific heat to determine the amount of heat needed to change ice to water, 6.7 Students will learn the definitions of heat of fusion, heat of vaporization and complete practice problems.	







Content Area: Physical Science	Grade Level: High School	
Title of Unit: Potential and Kinetic Energy	Number of Weeks/Days: 11 days	
Standards:	Assessment:	Resources:
HSPS2.3 HSPS3.3		

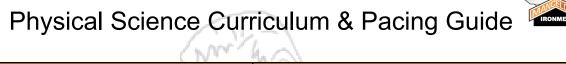






Content Area: Physical Science	Grade Level: High School	
Title of Unit: Forces	Number of Weeks/Days: 10 days	
Standards:	Assessment:	Resources:
HSPS2.2		

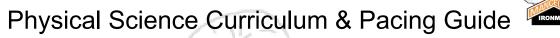






Content Area: Physical Science	Grade Level: High School	
Title of Unit: Forces Acting in Different Directions	Number of Weeks/Days: 11 days	
Standards:	Assessment: Resources:	
HSPS2.1		







Content Area: Physical Sci	ence	Grade Level: High School	
Title of Unit: Forces and Mo	tion in a Straight Line	Number of Weeks/Days: 7 days	
Standards:	2/1	Assessment:	Resources:
HSPS2.1 HSPS2.4			